

ALBA MODEL 52A.C. MAINS THREE

Circuit.—The H.F. valve, VP4 met (V1), is preceded by a tuned secondary aerial transformer. Volume is controlled by variable resistance common to cathode and auxiliary grid potentiometer. Coupling to the detector valve is by band-pass H.F. transformer.

The detector valve, SP4 met (V2), works as an anode bend detector with a grid condenser and leak. The auxiliary grid is fed from the H.T. through a high value of resistance, R6. The L.F. coupling is by resistance capacity filter, and the anode circuit is decoupled.

The output valve, PM24M or PT41 (V3), is a directly-heated pentode. The grid circuit is stabilised by R10, and the anode circuit is tone compensated by C11. Bias is obtained from a potentiometer formed by R11 and R12 across the L.S. field, which is in the negative H.T. lead.

Mains equipment consists of transformer, full-wave rectifier, IW3, and two electrolytic condensers used with the L.S. field for smoothing.

Special Notes.—The variable-mu H.F. valve must be placed in the V1 position.

The aerial transformer is inside the screen next V1, while the band-pass H.F. transformer is mounted inside the chassis.

Quick Tests.—Between the following terminals on L.S. transformer and chassis (note the polarity), looking from back and counting from right:—

- (1) Red, 114 v. negative H.T.—
- (2) White, 235 v. +, V3 anode.
- (3) Black, 250 v. +, H.T. + smoothed.
- (4) Blue, zero to chassis.
- (1) and (4) are L.S. field terminals.
- (2) and (3) are primary of output transformer.

Removing Chassis.—Remove knobs (grub screw), four holding bolts underneath.

VALVE READINGS

V.C. max.

Valve.	Type.	Electrode.	Volts.	M.A.
1	VP4	anode ...	234	2.5
		aux. grid ...	102	
2	SP4	anode* ...	94	.2
		aux. grid* ...	28	
3	PT41	anode ...	234	31
		aux. grid ...	250	6

* High values of resistances in circuit. Anode current test is the important factor.

CONDENSERS

C.	Purpose.	Mfd.
1	V1 cathode ...	.1
2	V1 screen ...	.01
3	V2 grid ...	.0002
4	Mains aerial ...	.0002
5	V2 aux. grid ...	.05
6	V2 cathode ...	.5
7	V2 anode by-pass ...	.0005
8	L.F. coupling V2, V3 ...	.005
9	V2 anode decoupling ...	.5
10	V3 grid decoupling ...	.5
11	V3 anode tone compensating ...	.01
12	H.T. smoothing ...	6 el.
13	H.T. smoothing ...	4 el.

RESISTANCES

R.	Purpose.	Ohms.
1	Limiting resistance in gram. lead	10,000
2	Part of bias and S.G. ptr.	30,000
3	Part of bias and S.G. ptr.	50,000
4	V2 grid leak ...	.5 meg.
5	V2 cathode bias ...	10,000
6	H.T. feed to V2 aux. grid	2 meg.
7	V2 anode L.F. coupling	.25 meg.
8	V2 anode decoupling ...	50,000
9	V3 grid leak ...	1 meg.
10	V3 grid stabiliser ...	.25 meg.
11	V3 bias ptr.	.8 meg.
12	V3 bias ptr.	2 meg.
	Volume control ...	11,800
	L.S. field (Magnavox 154)	2,500
	P. of output transformer	475

and lift chassis out. The speaker leads are sufficiently long to allow tests. Stand chassis outside cabinet with mains transformer resting on bottom of cabinet.

General Notes.—Mains transformer connections (see diagram):—

Leads A and H, set filaments.

Leads B and J, rectifier filament.

Tags C and E, rectifier anodes.

Tag D, H.T.—to L.S. field, C13 and R12.

Tag F, to chassis.

Lead G, also to chassis.

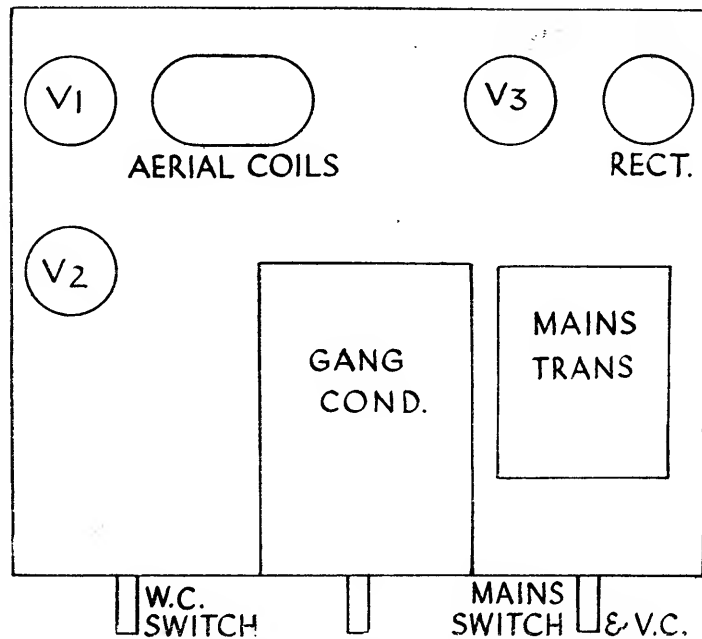
Note that the black lead from the 6 mfd. side of the block electrolytic condenser is connected to the thick earth connecting wire, while the black lead from the 4 mfd. side is

taken to the junction of R12, and the lead from D on the mains transformer.

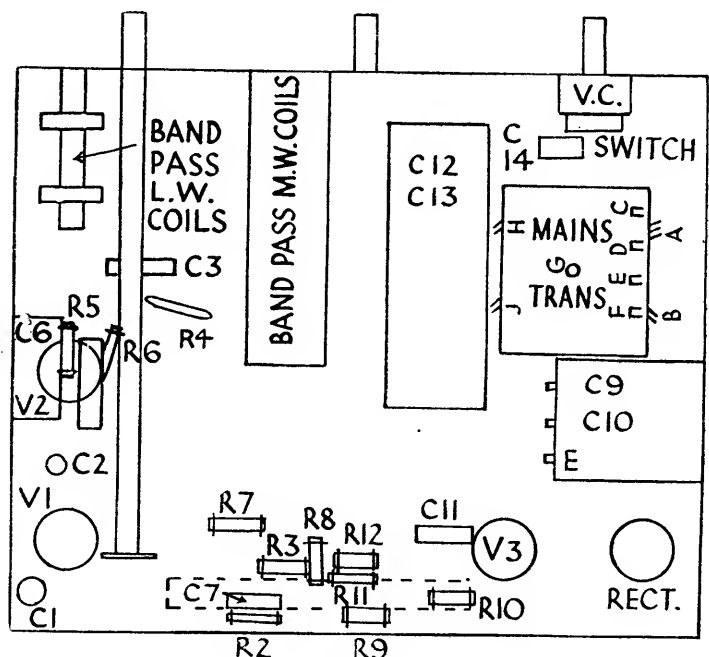
There is only one common positive lead.

Switch contacts are of the wiping type. Should they require cleaning the blades can be freed by undoing the four holding screws (these are screwed into the support and have no nuts). When cleaning, wipe the contact-makers with a dry duster.

Replacing Chassis.—Lay chassis inside cabinet. Replace the four holding screws, and before tightening them see that the tuning pointer is just clear of the escutcheon. Replace the knobs. The wave-change and V.C. knobs are marked.

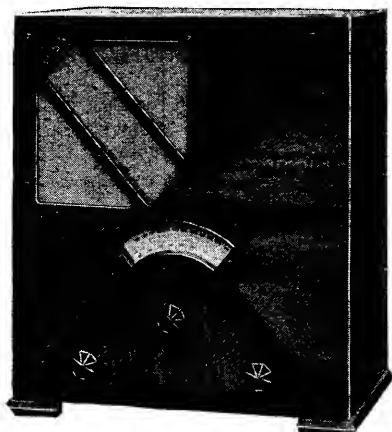


A tuned secondary aerial transformer is situated next to the variable-mu H.F. valve in the Alba 52 A.C. receiver.



The band-pass interval coupling is housed below the chassis, this construction contributing to the clean external appearance.

ALBA 52 A.C. MAINS THREE (Cont.)



The Alba 52A.C. is a product of A. J. Balcombe, Ltd. On the right is the circuit, which utilises pentodes in H.F., detector and output stages. It is interesting to note that the band-pass tuning circuits are between the H.F. and detector valves.

